

Amendments to the Specification:

Please insert the following paragraph at page 1, under the paragraph ending at line 15:

SEQUENCE LISTING

A Sequence Listing as required under 37 C.F.R. § 1.821(c) is submitted on a compact disc as permitted under 37 C.F.R. § 1.52(e). The data file on the compact disc has the file name 14581-003US1.txt, contains 344 KB of data, and was created on April 21, 2006.

Please amend Table 25 on page 118 as follows:

Table 25. Subunits of the Dynein Complex and their genomic sequences assigned as NCBI contig Accession Numbers (Gen Bank Acc. No., except where otherwise indicated) (NCBI contigs are derived from genomic sequence data assembled by NCBI staff)

Name of the Subunit	Gen Bank Accession Number	SEQ ID NO.:
Cytoplasmic dynein heavy chain 1	Mm NW_000055	28
Cytoplasmic dynein heavy chain 1	Hs AL118558	29
Cytoplasmic <u>Cytoplasmic</u> dynein intermediate chain 1	Mm NW_000272	30
Cytoplasmic <u>Cytoplasmic</u> dynein intermediate chain 1	Hs NT_023947	31
Cytoplasmic dynein	Mm NW_000176	32

intermediate chain 2		
Cytoplasmic dynein intermediate chain 2	Hs NT_005332.11	33
Cytoplasmic dynein light intermediate chain 1	Mm AC115796.2	34
Cytoplasmic dynein light intermediate chain 1	Hs NT_034532.2	35
Cytoplasmic dynein light intermediate chain 2	Mm AC118211.3	36
Cytoplasmic dynein light intermediate chain 2	Hs NT_010478.11	37
Cytoplasmic dynein 10kDa light chain	Mm NW_000236	38
Cytoplasmic dynein 10kDa light chain	Hs NT_009775	39
Cytoplasmic dynein light chain Tctex 1	Mm NW_000269	40
Cytoplasmic dynein light chain Tctex 1	Hs NT_007422	41
Cytoplasmic dynein light chain 2B	Hs NT_024797	42
DCTN 1	Mm NT_003134	43
DCTN 1	Hs NT_022184	44
DCTN 2	Mm MGI107733* (SEQ ID NO:60)	159

DCTN 2	Hs NT_009509	45
DCTN 3	Mm NW_000206	46
DCTN 3	Hs NT_023974	47
DCTN 4	Mm NW_000134	48
DCTN 4	Hs NT_034779	49
DCTN 5	Mm NT_036652	50
DCTN 6	Mm NW_000340	51
DCTN 6	Hs NT_007995	52
ARP1	Mm NW_000148	53
ARP1	Hs AL121928	54
ARP11	Mm NW_000053	55
ARP11	Hs AC005586	56
HAP1	Mm NT_033680	57
HAP1	Hs NT_010840	58
CLIP-170	Mm NW_000236	59
CLIP-170	Hs NT_009438	60

* Mouse Genome Informatics Tool of the Jackson Laboratory Accession No.

Please amend Table 93 on page 137 as follows:

Table 93. Mouse Dctn1 (P150) protein (SEQ ID NO.: [[127]]28)

Exon18 (nucleotide)

GGTGGGCAGGAGGCAACAGATATTGCCCTTCTTCTCCGAGACCTGGAAACATCATGTAGTGACA
 CCCGTCAGTTCTGCAAGAAGATCCGAAGGCGGATGCCGGGGACGGATGCTCCTGGGATCCCAGC
 AGCGCTGGCCTTTGGCTCACAG

Please amend Table 94 on page 137 as follows:

Table 94. Mouse Dctn1 (P150) protein (SEQ ID NO.: [[128]]29)

Exon19 (nucleotide)

GTATCCGACACACTCCTGGACTGCAGGAAGCACTTGACGTGGGTGGTAGCTGTTCTGCAGGAGG
TGGCAGCTGCAGCCGCCAGCTTATTGCCCCCTTGGCAGAGAACGAGGGGCTGCCTGTGGCTGC
ACTGGAGGAGCTGGCCTTCAAAGCAAGCGAGCAG

Please amend Table 95 on page 137 as follows:

Table 95. Mouse Dctn1 (P150) protein (SEQ ID NO.: [[129]]30)

Exon20 (nucleotide)

ATCTACGGGAGCCCCTCCAGCAGCCCCTATGAGTGTCTACGCCAGTCATGCACCATCCTCATCA
GCACGATGAACAAGCTGGCCACAGCCATGCAAGAAGGCGAGTATGACGCAGAGCGACCCCCGAG
CAAG

Please amend Table 96 on page 137 as follows:

Table 96. Mouse Dctn1 (P150) protein (SEQ ID NO.: [[130]]31)

Exon3 to 20 (nucleotide)

AGGGAGCCGATGCAGCTGCAAAGACCAGCAAACCTGCGGGGACTGAAGCCTAAGAAGGCACCGAC
AGCCCCGAAAGACCACAACCTCGACGGCCCAAGCCTACTCGCCAGCCAGCACTGGGGTGGCTGGG
CCAGTAGCTCCCTTGCGCCCTCTGGCTCAGCGTCAGCCGGGGAACCTAAGCAGCAGTGAGCCCA
GCACCCAGCTCAGACTCCGCTGGCAGCACCCATCATCCCCACACCGGCCCTCACCTCTCCTGG
AGCAGCACCCCCACTTCCATCTCCCTCTAAGGAAGAGGAAGGGCTGAGGGCTCAGGTACGGGAC
CTGGAGGAGAAGCTGGAGACCTGCGCCTAAAACGCTCAGAAGACAAAGCAAAGCTGAAAGAGC
TGGAGAAGCACAAGATCCAGCTGGAGCAGGTGCAGGAATGGAAGAGCAAAATGCAGGAGCAGCA
GGCAGACCTGCAGCGGCGCCTCAAGGAGGCTCGGAAGGAAGCCAAGGAGGCGCTAGAGGCAAAG
GAACGCTACATGGAGGAGATGGCCGACACAGCCGACGCTATCGAGATGGCCACTCTGGACAAGG
AGATGGCTGAAGAGCGCGCTGAGTCTCTGCAGCAAGAGGTGGAGGCACTGAAGGAACGGGTAGA
CGAGCTCACCACAGACCTGGAGATTCTCAAGGCTGAAATCGAAGAGAAAGGCTCTGATGGGGCC
GCATCAAGCTACCAGCTCAAGCAGCTGGAGGAGCAGAATGCCCGCCTGAAGGATGCCCTGGTGA
GGATGCGAGACCTCTCTTCCTCAGAGAAGCAGGAGCACGTGAAGCTGCAGAACTCATGGAAAA
GAAAAACCAGGAGCTGGAGGTCTGTGCGGCAGCAGCGCGAGCGTCTTCAGGAGGAGCTGAGCCAG
GCTGAGAGCACCATCGATGAGCTCAAAGAGCAGGTGGACGCGCTCTGGGAGCCGAGGAGATGG
TGGAGATGCTGACCGACCGGAACCTGAATCTAGAGGAGAAAGTGCGGGAGTTACGGGAGACTGT

GGGGGACTTGGAAGCCATGAACGAGATGAACGATGAGCTGCAGGAGAACGCACGGGAGACGGAG
CTGGAACCTCCGAGAGCAGCTGGACATGGCGGGCGCCCCGAGTGAGGGAAGCGCAGAAGCGAGTGG
AAGCCGCCCAGGAGACAGTCGCCGACTACCAGCAGACCATCAAGAAGTACCGCCAGTTGACTGC
CCACCTACAGGATGTCAATCGGGAGCTGACAAACCAGCAGGAAGCGTCTGTAGAGAGGCAGCAG
CAGCCGCCGCCAGAGACTTTTGTATTTCAAATCAAGTTTGCTGAGACCAAGGCTCATGCCAAGG
CCATTGAGATGGAGTTGAGACAGATGGAAGTTGCCAGGCCAACCGGCACATGTCCCTGCTGAC
AGCCTTTATGCCTGACAGCTTCCTTCGGCCAGGTGGAGACCACGACTGTGTCTTGGTGCTGCTG
CTCATGCCCCGACTCATTTGCAAGGCAGAGCTCATCCGGAAGCAGGCCCAGGAGAAGTTTGACC
TGAGCGAGAACTGTTTCGGAGCGGCCCGGGCTGCGGGGAGCTGCCGGGGAGCAGCTGAGCTTTGC
TGCTGGACTGGTGTACTCGCTGAGTCTGCTGCAGGCCACGCTGCACCGCTATGAGCATGCCCTC
TCTCAGTGAGTGTGGACGTGTATAAGAAGGTGGCAGCCTGTACCCCGAGATGAGCGCCACG
AGCGCTCCTTAGATTTCTCATTGAGCTGCTGCACAAGGATCAGCTGGATGAGACTGTCAACGT
GGAGCCCCCTCAMCAAGGSCATCAAGTATTACCAGCATCTGTACAGSATCCACCTCGCTGAACAA
CCCGAGGACTCCACCATGCAGCTGGCTGACCACATCAAGTTCACCCAGAGTGCCCTGGACTGCA
TGGGCGTGAGGTGGGGCGGCTGCGTGCTTCTTGAGGGTGGGCAGGAGGCAACAGATATTGC
CCTTCTTCTCCGAGACCTGGAACATCATGTAGTGACACCCGTCAGTTCTGCAAGAAGATCCGA
AGGCGGATGCCGGGGACGGATGCTCCTGGGATCCCAGCAGCGCTGGCCTTTGGCTCACAGGTAT
CCGACACACTCCTGGACTGCAGGAAGCACTTGACGTGGGTGGTAGCTGTTCTGCAGGAGGTGGC
AGCTGCAGCCGCCAGCTTATTGCCCCCTTGGCAGAGAACGAGGGGCTGCCTGTGGCTGCACTG
GAGGAGCTGGCCTTCAAAGCAAGCGAGCAGATCTACGGGAGCCCCTCCAGCAGCCCCCTATGAGT
GTCTACGCCAGTCATGCACCATCCTCATCAGCACGATGAACAAGCTGGCCACAGCCATGCAAGA
AGGCGAGTATGACGCAGAGCGACCCCCGAGCAAG

Please amend Table 97 on page 138 as follows:

Table 97. Mouse Dctn1 (P150) protein (SEQ ID NO.: [[131]]32)

Exon22 (nucleotide)

GGAGAGGAGCTGAGTGAGGCCAACGTGCGGCTCAGCCTCCTGGAGAAGAAGTTGGACAGCGCTG
CCAAGGATGCAGACGAGCGAATCGAGAAAGTTCAGACACGGCTGGACGAGACTCAGACCCTGCT
GCGGAAGAAGGAGAA

Please amend Table 98 on page 138 as follows:

Table 98. Mouse Dctn1 (P150) protein (SEQ ID NO.: [[132]]33)

Exon23 (nucleotide)

AGACTTTGAGGAGACAATGGACGCACTCCAGGCTGACATCGACCAGCTGGAGGCAGAGAAGGCA
GAGCTCAAGCAGCGCCTGAACAGCCAGTCCAAGCGCACAATCGAGGGGCTCCGGGGCCCCCTC
CGTCAGGCATCGCTACCCTGGTCTCTGGCATCGCTGGTG

Please amend Table 99 on page 138 as follows:

Table 99. Mouse Dctn1 (P150) protein (SEQ ID NO.: [[133]]34)

Exon 22 to 23 (nucleotide)

GGAGAGGAGCTGAGTGAGGCCAACGTGCGGCTCAGCCTCCTGGAGAAGAAGTTGGACAGCGCTG
CCAAGGATGCAGACGAGCGAATCGAGAAAGTTCAGACACGGCTGGACGAGACTCAGACCCTGCT
GCGGAAGAAGGAGAAAGACTTTGAGGAGACAATGGACGCACTCCAGGCTGACATCGACCAGCTG
GAGGCAGAGAAGGCAGAGCTCAAGCAGCGCCTGAACAGCCAGTCCAAGCGCACAAATCGAGGGGC
TCCGGGGCCCCCTCCGTCAGGCATCGCTACCCTGGTCTCTGGCATCGCTGGTG

Please amend Table 100 on page 139 as follows:

Table 100. Human DCTN 1 (P150) protein (SEQ ID NO.: [[134]]35)

Exon 2 (nucleotide)

ACGCCCAGCGGCAGCAGGATGAGTGCGGAGGCAAGCGCCCGGCCTCTGCGGGTGGGCTCCCGTG
TAGAGGTGATTGGAAAAGGCCACCGAGGCACTGTGGCCTATGTTGGAGCCACACTGTTTGCCAC
TGGCAAATGGGTAGGCGTGATTCTGGATGAAGCAAAGGGCAAAAATGATGGAAGTGTTCAGGC
AGGAAGTACTTCACTTGTGATGAAGGGCATGGCATCTTTGTGCGCCAGTCCCAG

Please amend Table 101 on page 139 as follows:

Table 101. Human DCTN 1 (P150) protein (SEQ ID NO.: [[135]]36)

Exon3 (nucleotide)

ATCCAGGTATTTGAAGATGGAGCAGATACTACTTCCCCAGAGACACCTGATTCTTCTGCTTCAA
AAGTCCTCAAAAGAG

Please amend Table 102 on page 139 as follows:

Table 102. Human DCTN 1 (P150) protein (SEQ ID NO.: [[136]]37)

Exon4 (nucleotide)

AGGGAACTGATACAACTGCAAAGACTAGCAAAGT

Please amend Table 103 on page 139 as follows:

Table 103. Human DCTN 1 (P150) protein (SEQ ID NO.: [[137]]38)

Exon5 (nucleotide)

ACCACAACCTCGGCGACCCAAG

Please amend Table 104 on page 139 as follows:

Table 104. Human DCTN 1 (P150) protein (SEQ ID NO.: [[138]]39)

Exon2 to 5 (nucleotide)

ACGCCCAGCGGCAGCAGGATGAGTGCGGAGGCAAGCGCCCGGCCTCTGCGGGTGGGCTCCCGTG
TAGAGGTGATTGGAAAAGGCCACCGAGGCACTGTGGCCTATGTTGGAGCCACACTGTTTGCCAC
TGGCAAATGGGTAGGCGTGATTCTGGATGAAGCAAAGGGCAAAAATGATGGAACTGTTCAAGGC
AGGAAGTACTTCACCTTGTGATGAAGGGCATGGCATCTTTGTGCGCCAGTCCCAGATCCAGGTAT
TTGAAGATGGAGCAGATACTACTTCCCCAGAGACACCTGATTCTTCTGCTTCAAAGTCCTCAA
AAGAGAGGGAACTGATACAACCTGCAAAGACTAGCAAACCTGCGGGGACTGAAGCCTAAGAAGGCA
CCGACAGCCCCGAAAGACCACAACCTCGGCGACCCAAG

Please amend Table 105 on page 140 as follows:

Table 105. Human DCTN 1 (P150) protein (SEQ ID NO.: [[139]]40)

Exon6 (nucleotide)

CCCACGCGCCCAGCCAGTACTGGGGTGGCTGGGGCCAGTAGCTCCCTGGGCCCCTCTGGCTCAG
CGTCAGCAGGTGAGCTGAGCAGCAGTGAGCCCAGCACCCCGGCTCAGACTCCGCTGGCAGCACC
CATCATCCCCACGCCGGTCCTCACCTCTCCTGGAGCAGTCCCCCGCTTCCTTCCCCATCCAAG

Please amend Table 106 on page 140 as follows:

Table 106. Human DCTN 1 (P150) protein (SEQ ID NO.: [[140]]41)

Exon7 (nucleotide)

GAGGAGGAGGGACTAAGGGCTCAGGTGCGGGACCTGGAGGAGAACTAGAGACCCTGAGACTGA
AACGGGCAGAAGACAAAGCAAAGCTAAAAGAGCTGGAGAAACACAAAATCCAGCTGGAGCAGGT
GCAGGAATGGAAGAGCAAAATGCAGGAGCAGCAGGCCGACCTGCAGCGGCGCCTCAAGGAGGCG
AGAAAG

Please amend Table 107 on page 140 as follows:

Table 107. Human DCTN 1 (P150) protein (SEQ ID NO.: [[141]]42)

Exon8 (nucleotide)

GAAGCCAAGGAGGCGCTGGAGGCAAAGGAACGCTATATGGAGGAGATGGCTGATACTGCTGATG
CCATTGAGATGGCCACTTTGGACAAGGAGATGGCTGAAGAGCGGGCTGAGTCCCTGCAGCAGGA
GGTGGAGGCACTGAAGGAGCGGGTGGACGAGCTCACTACTGACTTAGAGATCCTCAAGGCTGAG
ATTGAAGAGAAG

Please amend Table 108 on page 140 as follows:

Table 108. Human DCTN 1 (P150) protein (SEQ ID NO.: [[142]]43)

Exon9 (nucleotide)

GCTCAGATGGCGCTGCATCCAGTTATCAGCTCAAGCAGCTTGAGGAGCAGAATGCCCGCCTGAA
GGATGCCCTGGTGAG

Please amend Table 109 on page 140 as follows:

Table 109. Human DCTN 1 (P150) protein (SEQ ID NO.: [[143]]44)

Exon10 (nucleotide)

GATGCGGGATCTTTCTTCCTCAGAGAAGCAGGAGCATGTGAAGCTCCAGAAGCTCATGGAAAAG
AAGAACCAAGAGCTGGAAGTTGTGAGGCAACACGGGAGCGTCTGCAGGAGGAGCTAAGCCAGG
CAGAGAGCACCATTGATGAGCTCAAGGAGCAG

Please amend Table 110 on page 140 as follows:

Table 110. Human DCTN 1 (P150) protein (SEQ ID NO.: [[144]]45)

Exon11 (nucleotide)

GTGGATGCTGCTCTGGGTGCTGAGGAGATGGTGGAGATGCTGACAGATCGGAACCTGAATCTGG
AAGAGAAAGTGC GCGAGTTGAGGGAGACTGTGGGAGACTTG

Please amend Table 112 on page 141 as follows:

Table 112. Human DCTN 1 (P150) protein (SEQ ID NO.: [[145]]46)

Exon12 (nucleotide)

GAAGCGATGAATGAGATGAACGATGAGCTGCAGGAGAATGCACGTGAGACAGAACTGGAGCTGC
GGGAGCAGCTGGACATGGCAGGCGCGGGTTCGTGAGGCCAGAAAGCGTGTGGAGGCAGCCCA
GGAGACGGTTGCAGACTACCAGCAGACCATCAAGAAGTACCGCCAGCTGACCGCCCATCTACAG

Please amend Table 113 on page 141 as follows:

Table 113. Human DCTN 1 (P150) protein (SEQ ID NO.: [[146]]47)

Exon13(nucleotide)

GATGTGAATCGGGAAGTACAAACCAGCAGGAAGCATCTGTGGAGAGGCAACAGCAGCCACCTC
CAGAGACCTTTGACTTCAAATCAAGTTTGCTGAGACTAAGGCCCATGCCAAG

Please amend Table 114 on page 141 as follows:

Table 114. Human DCTN 1 (P150) protein (SEQ ID NO.: [[147]]48)

Exon14 (nucleotide)

GCAATTGAGATGGAATTGAGGCAGATGGAGGTGGCCCAGGCCAATCGACACATGTCCCTGCTGA
CAGCCTTCATGCCTGACAGCTTCCTTCGGCCAGGTGGGGACCATGACTGCGTTCTGGTGCTGTT
GCTCATGCCTCGTCTCATTTGCAAG

Please amend Table 115 on page 141 as follows:

Table 115. Human DCTN 1 (P150) protein (SEQ ID NO.: [[148]]49)

Exon15 (nucleotide)

GCAGAGCTGATCCGGAAGCAGGCCAGGAGAAGTTTGAAC TAAGTGAGAACTGTT CAGAGCGGC
CTGGGCTGCGAGGAGCTGCTGGGGAGCAACTCAGCTTTGCTGCTGGACTGGTGTACTCGCTGAG
CCTGCTGCAGGCCACGCTACACCGCTATGAGCA

Please amend Table 116 on page 141 as follows:

Table 116. Human DCTN 1 (P150) protein (SEQ ID NO.: [[149]]50)

Exon16 (nucleotide)

TGCCCTCTCTCAGTGCAGTGTGGATGTGTATAAGAAAGTGGGCAGCCTGTACCCTGAGATGAGT
GCCCATGAGCGCTCCTTGATTTCCTCATTGAACTGCTGCACAAGGATCAGCTGGATGAGACTG
TCAATGTGGAGCCTCTACCAAGGCCATCAAGTACTATCAG

Please amend Table 117 on page 141 as follows:

Table 117. Human DCTN 1 (P150) protein (SEQ ID NO.: [[150]]51)

Exon17 (nucleotide)

CATCTGTACAGCATCCACCTTGCCGAACAGCCTGAGGACTGTACTATGCAGCTGGCTGACCACA
TTAAG

Please amend Table 118 on page 142 as follows:

Table 118. Human DCTN 1 (P150) protein (SEQ ID NO.: [[151]]52)

Exon18 (nucleotide)

TTACGCAGAGTGCTCTGGACTGCATGAGTGTGGAGGTAGGACGGCTGCGTGCCTTCTTGCA

Please amend Table 119 on page 142 as follows:

Table 119. Human DCTN 1 (P150) protein (SEQ ID NO.: [[152]]53)

Exon19 (nucleotide)

GGTGGGCAGGAGGCTACAGATATTGCCCTCCTGCTCCGGGATCTGGAACTTCATGCAGTGACA
TCCGCCAGTTCTGCAAGAAGATCCGAAGGCGAATGCCAGGGACAGATGCTCCTGGGATCCCAGC
TGCACTGGCCTTTGGACCACAG

Please amend Table 120 on page 142 as follows:

Table 120. Human DCTN 1 (P150) protein (SEQ ID NO.: [[153]]54)

Exon20 (nucleotide)

GTATCTGACACGCTCCTAGACTGCAGGAAACACTTGACGTGGGTTCGTGGCTGTGCTGCAGGAGG
TGCGAGCTGTGCTGCCAGCTCATTGCCCCACTGGCAGAGAATGAGGGGCTACTTGTGGCTGC
TCTGGAGGAAGTGGCTTTCAAAGCAAGCGAGCAG

Please amend Table 121 on page 142 as follows:

Table 121. Human DCTN 1 (P150) protein (SEQ ID NO.: [[154]]55)

Exon21 (nucleotide)

ATCTATGGGACCCCCTCCAGCAGCCCCTATGAGTGTCTGCGCCAGTCATGCAACATCCTCATCA
GTACCATGAACAAGCTGGCCACAGCCATGCAGGAGGGGGAGTATGATGCAGAGCGGCCCCCAG
CAAG

Please amend Table 122 on page 142 as follows:

Table 122. Human DCTN 1 (P150) protein (SEQ ID NO.: [[155]]56)

Exon4 to 21 (nucleotide)

AGGGAACTGATACAACTGCAAAGACTAGCAAAGCTGCGGGGACTGAAGCCTAAGAAGGCACCGAC
AGCCCGAAAGACCACAAGCTCGGCGACCCCAAGCCACGCGCCAGCCAGTACTGGGGTGGCTGGG
GCCAGTAGCTCCCTGGGCCCCCTCTGGCTCAGCGTCAGCAGGTGAGCTGAGCAGCAGTGAGCCCA
GCACCCCGGCTCAGACTCCGCTGGCAGCACCCATCATCCCCACGCCGCTCCTCACCTCTCCTGG
AGCAGTCCCCCGCTTCCCTTCCCCATCCAAGGAGGAGGAGGGACTAAGGGCTCAGGTGCGGGAC
CTGGAGGAGAACTAGAGACCCCTGAGACTGAAACGGGCAGAAGACAAAGCAAAGCTAAAAGAGC
TGGAGAAACACAAAATCCAGCTGGAGCAGGTGCAGGAATGGAAGAGCAAATGCAGGAGCAGCA
GGCCGACCTGCAGCGGCGCCTCAAGGAGGCGAGAAAGGAAGCCAAGGAGGCGCTGGAGGCAAAG
GAACGCTATATGGAGGAGATGGCTGATACTGCTGATGCCATTGAGATGGCCACTTTGGACAAGG
AGATGGCTGAAGAGCGGGCTGAGTCCCTGCAGCAGGAGGTGGAGGCACTGAAGGAGCGGGTGA
CGAGCTCACTACTGACTTAGAGATCCTCAAGGCTGAGATTGAAGAGAAGGGCTCAGATGGCGCT
GCATCCAGTTATCAGCTCAAGCAGCTTGAGGAGCAGAATGCCCGCCTGAAGGATGCCCTGGTGA
GGATGCGGGATCTTTCTTCTCAGAGAAGCAGGAGCATGTGAAGCTCCAGAAGCTCATGGAAAA
GAAGAACCAAGAGCTGGAAGTTGTGAGGCAACAGCGGGAGCGTCTGCAGGAGGAGCTAAGCCAG
GCAGAGAGCACCATTGATGAGCTCAAGGAGCAGGTGGATGCTGCTCTGGGTGCTGAGGAGATGG
TGGAGATGCTGACAGATCGGAACCTGAATCTGGAAGAGAAAGTGCGCGAGTTGAGGGAGACTGT
GGGAGACTTGGAAGCGATGAATGAGATGAACGATGAGCTGCAGGAGAATGCACGTGAGACAGAA
CTGGAGCTGCGGGAGCAGCTGGACATGGCAGGCGCGCGGGTTTCGTGAGGGCCAGAAAGCGTGTGG
AGGCAGCCAGGAGACGGTTGCAGACTACCAGCAGACCATCAAGAAGTACCGCCAGCTGACCGC
CCATCTACAGGATGTGAATCGGGAAGTACAAACAGCAGGAAGCATCTGTGGAGAGGCAACAG
CAGCCACCTCCAGAGACCTTTGACTTCAAAATCAAGTTTGTGCTGAGACTAAGGCCCATGCCAAGG
CAATTGAGATGGAATTGAGGCAGATGGAGGTGGCCAGGCCAATCGACACATGTCCCTGCTGAC
AGCCTTCATGCCTGACAGCTTCCTTCGGCCAGGTGGGGACCATGACTGCGTTCTGGTGCTGTTG
CTCATGCCTCGTCTCATTTGCAAGGCAGAGCTGATCCGGAAGCAGGCCAGGAGAAGTTTGAAC
TAAGTGAGAACTGTTTCAAGCGGCCTGGGCTGCGAGGAGCTGCTGGGGAGCAACTCAGCTTTGC
TGCTGGACTGGTGTACTCGCTGAGCCTGCTGCAGGCCACGCTACACCGCTATGAGCATGCCCTC
TCTCAGTGCAGTGTGGATGTGTATAAGAAAGTGGGCAGCCTGTACCCTGAGATGAGTGCCCATG
AGCGCTCCTTGATTTCTTCATTGAACTGCTGCACAAGGATCAGCTGGATGAGACTGTCAATGT
GGAGCCTCTACCAAGGCCATCAAGTACTATCAGCATCTGTACAGCATCCACCTTGCCGAACAG
CCTGAGGACTGTACTATGCAGCTGGCTGACCACATTAAGTTACGCAGAGTGCTCTGGACTGCA
TGAGTGTGGAGGTAGGACGGCTGCGTGCTTCTTGCAAGGTGGGCAGGAGGCTACAGATATTGC
CCTCCTGCTCCGGGATCTGGAACTTCATGCAGTGACATCCGCCAGTTCTGCAAGAAGATCCGA
AGGCGAATGCCAGGGACAGATGCTCCTGGGATCCCAGCTGCACTGGCCTTTGGACCACAGGTAT
CTGACACGCTCCTAGACTGCAGGAAACACTTGACGTGGGTCTGTGGCTGTGCTGCAGGAGGTGGC
AGCTGCTGCTGCCAGCTCATTGCCCCACTGGCAGAGAATGAGGGGCTACTTGTGGCTGCTCTG
GAGGAACTGGCTTTCAAAGCAAGCGAGCAGATCTATGGGACCCCTCCAGCAGCCCTATGAGT

GTCTGCGCCAGTCATGCAACATCCTCATCAGTACCATGAACAAGCTGGCCACAGCCATGCAGGA
GGGGGAGTATGATGCAGAGCGGCCCCCAGCAAG

Please amend Table 123 on page 143 as follows:

Table 123. Human DCTN 1 (P150) protein (SEQ ID NO.: [[156]]57)

Exon23 (nucleotide)

GGAGAGGAGCTAAGTGAGGCCAATGTGCGGCTGAGCCTCCTGGAGAAGAAGTTGGACAGTGCTG
CCAAGGATGCAGATGAGCGCATCGAGAAAGTCCAGACTCGGCTGGAGGAGACCCAGGCACTGCT
GCGAAAGAAGGAGAA

Please amend Table 124 on page 143 as follows:

Table 124. Human DCTN 1 (P150) protein (SEQ ID NO.: [[157]]58)

Exon24 (nucleotide)

AGAGTTTGAGGAGACAATGGATGCACTCCAGGCTGACATCGACCAGCTGGAGGCAGAGAAGGCA
GAACTAAAGCAGCGTCTGAACAGCCAGTCCAAACGCACGATTGAGGGACTCCGGGGCCCTCCTC
CTTCAGGCATTGCTACTCTGGTCTCTGGCATTGCTGGTG

Please amend Table 125 on page 144 as follows:

Table 125. Human DCTN 1 (P150) protein (SEQ ID NO.: [[158]]59)

Exon 23 to 24 (nucleotide)

GGAGAGGAGCTAAGTGAGGCCAATGTGCGGCTGAGCCTCCTGGAGAAGAAGTTGGACAGTGCTG
CCAAGGATGCAGATGAGCGCATCGAGAAAGTCCAGACTCGGCTGGAGGAGACCCAGGCACTGCT
GCGAAAGAAGGAGAAAGAGTTTGAGGAGACAATGGATGCACTCCAGGCTGACATCGACCAGCTG
GAGGCAGAGAAGGCAGAACTAAAGCAGCGTCTGAACAGCCAGTCCAAACGCACGATTGAGGGAC
TCCGGGGCCCTCCTTCAGGCATTGCTACTCTGGTCTCTGGCATTGCTGGTG

Please amend the paragraph beginning on page 152, line 10 as follows:

It may also be a protein sample. In a preferred embodiment the nucleic acid sample or the protein sample comprises one or more of the nucleic acids coding for proteins or the proteins itself, which are subunits of the dynactin/dynein complex, preferably the cytoplasmic dynein heavy chain 1, ~~e.g. according to SEQ ID NOS.: 28 or 29~~, the cytoplasmic dynein intermediate chain 1, ~~e.g. according to SEQ ID NOS.: 30 or 31~~, the cytoplasmic dynein intermediate chain 2, ~~e.g. according to SEQ ID NOS.: 32 or 33~~, the cytoplasmic dynein light intermediate chain 1, ~~e.g. according to SEQ ID NOS.: 34 or 35~~, the cytoplasmic dynein light intermediate chain 2, ~~e.g. according to SEQ ID NOS.: 36 or 37~~; the cytoplasmic dynein 10 kDa light chain, ~~e.g. according to SEQ ID NOS.: 38 or 39~~, the cytoplasmic dynein light chain Tctex 1, ~~e.g. according to SEQ ID NOS.: 40 or 41~~, the cytoplasmic dynein light chain 2B, ~~e.g. according to SEQ ID NO.: 42~~, DCTN 1, ~~e.g. according to SEQ ID NOS.: 43 or 44~~, DCTN 2, ~~e.g. according to SEQ ID NO.: 45~~, DCTN 3, ~~e.g. according to SEQ ID NOS.: 46 or 47~~, DCTN 4, ~~e.g. according to SEQ ID NOS.: 48 or 49~~, DCTN 5, ~~e.g. according to SEQ ID NO.: 50~~, DCTN 6, ~~e.g. according to SEQ ID NOS.: 51 or 52~~, ARP1, ~~e.g. according to SEQ ID NOS. 53 or 54~~, ARP11, ~~e.g. according to SEQ ID NOS. 55 or 56~~, HAP1, ~~e.g. according to SEQ ID NO. 57 or 58~~, and CLIP-170, ~~e.g. according to SEQ ID NOS.: 59 or 60~~), more preferably the cytoplasmic dynein heavy chain 1, cytoplasmic dynein intermediate chain 1, cytoplasmic dynein intermediate chain 2, and/or DCTN 1, ~~e.g., according to the above mentioned corresponding SEQ ID NOS.~~